

Gray Matters

An Economic Analysis
of Yavapai County's
Senior Industries

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Introduction

In the face of a growing and aging senior population in Yavapai County, questions have been raised about the capacity to serve this population in the future. Will the county's workforce be adequate to staff long-term health care facilities and other industries that serve seniors? Will the area's public institutions have the resources to address senior needs? Will the region's infrastructure be ready to meet the demands of senior population growth?

To begin to address such questions, the following research report was commissioned by the Arizona Department of Commerce in association with Yavapai College. The immediate goal is to provide baseline economic data and analysis on the status of senior industries in Yavapai County. The ultimate objective, however, is that this information be used as a tool by business leaders, local governments, and area institutions to collaborate on strategic plans that strengthen senior industries – and thereby assure adequate health care capacity and high levels of service to the county's aging population for the future.

Senior industries is currently recognized as an important economic cluster in Arizona and has been identified by the Governor's Strategic Partnership for Economic Development as one of 11 industry clusters in the state that collectively drive the economy. The term "cluster" refers to a geographic concentration of interdependent companies – as well as their suppliers, skilled work force, and institutions – that together constitute an important competitive advantage for a region.

Dynamic clusters act as primary growth influences on local economies because they produce goods or services that are exported to customers outside the region. This creates an influx of "new" money that stimulates economic activity in other areas of the local economy. Clusters also attract related businesses to an area, and they tend to spawn new start-ups and innovation.

In Yavapai County, senior industries has not yet reached the level of a classic export-driven cluster because it lacks significant sales of its products outside the region. As an economic factor in the county, however, senior industries exerts a powerful influence. Its financial and employment effects ripple across most sectors of the local economy.

This report profiles Yavapai County's senior industries, beginning with a brief overview of senior industries components and a listing of significant findings of the study. In following sections, the report presents more detailed information on the age group characteristics of county residents, the spending patterns of seniors, the economic composition and relative size of senior industries, and the dynamics and requirements for growth of senior industries. In its conclusion, the report presents a menu of options for strengthening senior industries in Yavapai County. All analysis is based on the latest available demographic and economic data at the time of writing, as well as primary and secondary research performed by Morrison Institute for Public Policy in the fall of 2001.

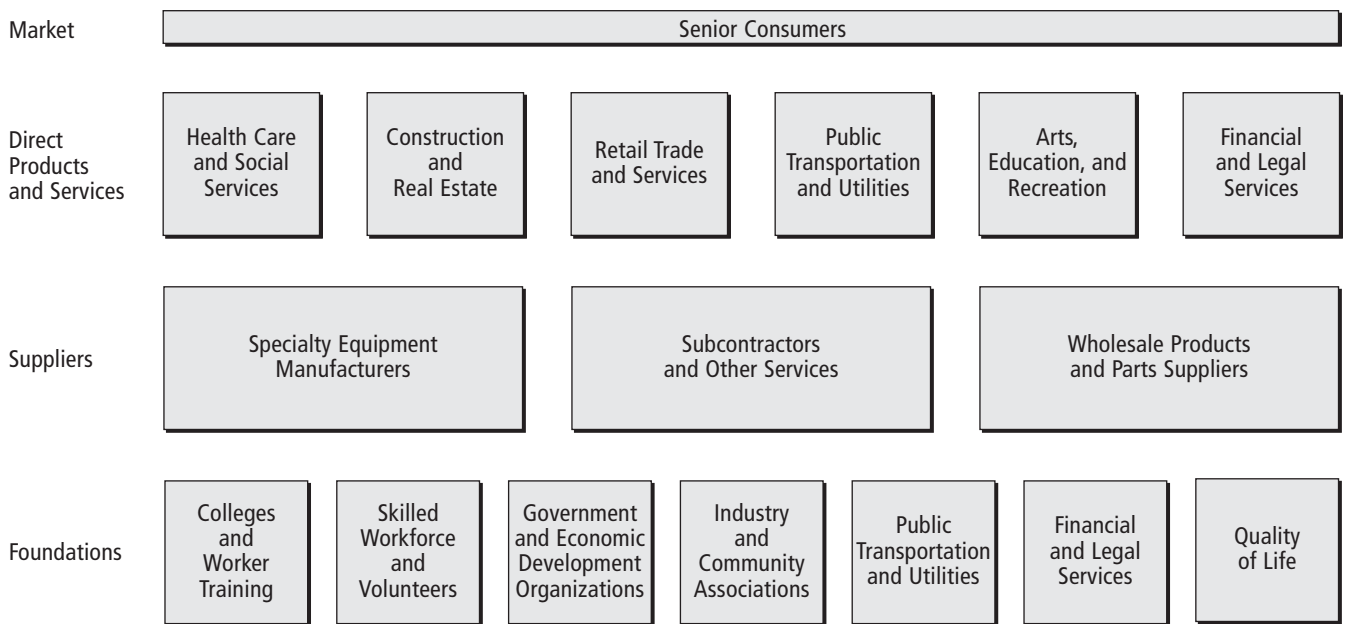
Overview

The senior population in Yavapai County is disproportionately large due to a substantial net in-migration of middle-aged or older individuals who then age in place. Senior migrants arrive in the county carrying not only the net worth they earned elsewhere, but also the ability to import revenue into the county in the form of retirement benefits, Medicare, dividends, interest, rent payments from outside the region, and other types of income. The consistent flow of outside revenue due to seniors has created what is known as a “mailbox economy” in Yavapai County. The economic impact of senior spending also reveals itself in the county’s industrial mix, which is characterized by higher than average shares of activity in construction, real estate, retail sales, and health care.

Primary Components of Senior Industries

Businesses that provide essential and/or highly desirable products and services to the senior population (defined for this study as people 55 or older) make up the core components of senior industries in Yavapai County. An organizational chart, below, illustrates the main components of senior industries and depicts how they are linked hierarchically. It contains four categories of components: 1) the market for senior industry products and services, 2) direct providers of products and services, 3) specialized suppliers of the direct providers, and 4) the foundations of senior industries, which consist of underlying infrastructure and institutions that help support economic vitality.

FIGURE 1: Components of Senior Industries in Yavapai County



Market: The senior industries market is made up almost entirely of local residents – the seniors who live in Yavapai County. These seniors either stayed in Yavapai County after retirement and aged in place, or they relocated to the county and essentially bought into a Yavapai County lifestyle.

Direct Products and Services: Businesses that directly affect seniors offer products and services that seniors need in order to live and enjoy life in Yavapai County. While these products and services are generally available to the younger population as well, the businesses that provide them are strongly influenced by senior expenditures. Senior spending most heavily impacts health care and social services. This industry sector includes not only medical professionals, hospitals, and elderly care facilities, but also a variety of family, community, and emergency services, including those provided by government agencies, non-profits, and volunteer organizations. Other sectors represented in the cluster – such as construction and real estate or arts, education, and recreation – either receive a significant share of revenue from senior expenditures or contribute substantially to making Yavapai County an attractive and viable place for seniors to live.

Suppliers: Companies that supply materials and services to the direct providers range from local subcontractors and other specialty services (e.g., medical billing), to national wholesalers of raw materials or retail products, and specialty manufacturers of critical equipment (e.g., medical instruments, office machines, electronic casino games). Nearly all of the wholesale suppliers and specialty manufacturers are located outside of the region.

Foundations: The foundation of senior industries is comprised of a diverse mix of institutions and infrastructure components that have the potential to attract seniors and benefit existing firms. Workforce training and retention is of particular importance to the labor intensive components of senior industries because the county's employment base is relatively small compared to the total population – about 20 percent below the national average. The region's attractive quality of life is also a crucial foundation of senior industries because it plays a primary role in attracting and retaining senior residents. Furthermore, government policies perform a significant function in determining how well seniors are served both by public agencies and private enterprises.

Major Findings of this Study

- **Yavapai County's population is almost a decade older than the nation as a whole – and it is growing even older.** The region's continuing attraction as a retirement haven, and the aging in place of current residents, has helped raise the county's median age by more than two years since 1990. Baby-boomers, who are just now reaching the senior age groups (55 or older), constitute the largest segment of the population, and as they continue to grow older the county's median age will continue to rise.
- **Rapid growth of the population and the economy of Yavapai County has been fueled almost entirely by in-migration of new residents.** All of the county's population growth since 1990 is the result of people migrating into the region. Approximately one-third of those in-migrants each year are over the age of 55, and their spending adds significantly to the local economy. Another third of the county's in-migrants are baby-boomers who will begin retiring in significant numbers during the next decade.
- **Seniors spend more than their share and have a high impact on specific industry sectors, including medical services, construction, real estate, retail trade, and other services.** These sectors dominate the local economy, but most individual business establishments within them are relatively small and not high paying. Employers report difficulties finding both skilled and entry-level workers. Few businesses have significant exports outside the region – with the exception of gambling, which routinely markets to seniors in Arizona's metropolitan areas and also draws tourists from other areas outside the county.

- **Half of Yavapai County’s health care and social assistance facilities reside in Prescott.** Most of these offices tend to be small relative to national employment figures. Hourly wages follow national norms for most occupations, but productivity appears to be low compared to national averages.
- **Firms comprising senior industries are not well connected across industry sectors.** Major components of senior industries – such as health care and construction – have traditionally found little reason to combine forces, consequently it is unusual for them to engage in joint ventures or other cooperative enterprises that cross sectors. Within individual sectors, however, firms tend to develop complex interrelationships in order to efficiently conduct commerce. Most businesses also maintain working relationships with area governments and schools.
- **The economic future of senior industries in Yavapai County hinges on resolving workforce shortages, assuring sufficient capacity to serve the needs of an aging population, and protecting the region’s quality of life.** These issues, which need to be addressed by a working group of senior industries leaders, are discussed more fully in this report’s final section, “Opportunities for Collaborative Action.” Over the long term, senior industries will also need to attract or spawn its own export-driven businesses in order to create more high quality jobs and increase the wealth of the region’s workers.

Demographics of Yavapai County

In recent years, an increasing proportion of the American population has been retiring before the age of 65, and a small but important segment of this group has made a long-distance move upon retirement. A relatively large number of these retirees, commonly called “seniors,” currently live in Yavapai County. Regardless of whether these seniors are defined as being over 55, over 60, or over 65 years of age (for this report, the senior population is defined as 55 years or older) Yavapai County had the second highest proportion of seniors in 2000 among counties in Arizona, with only the much less populous La Paz County having a higher percentage. Among the attributes of Yavapai County’s overall population are the following:

- **Yavapai County’s age distribution tilts strongly toward older age groups.** The 2000 census shows that the county’s median age of 44.5 years is approximately one decade older than both the state and the national median age (34.2 years and 35.3 years respectively). In addition, the proportion of the county’s population in the older age groups (45 and up) was higher than state and national proportions, with the widest differences among those 65 to 84. Meanwhile, the proportion of every younger age group (less than 45 years old) was lower than state and national totals, with the greatest shortfall among those 20 to 34 years old and children under 10.

TABLE 1: Age Distribution in Yavapai County, 2000

Age Group	Percent of Yavapai Population	Difference in Share from Arizona	Difference in Share from U.S.
0-4	5.2%	-2.3%	-1.6%
5-9	5.7	-1.9	-1.6
10-14	6.4	-1.0	-0.9
15-19	6.3	-0.9	-0.9
20-24	4.7	-2.4	-2.0
25-34	9.1	-5.4	-5.1
35-44	13.2	-1.8	-2.8
45-54	14.5	2.3	1.1
55-59	6.6	1.9	1.8
60-64	6.3	2.3	2.5
65-74	12.1	5.0	5.6
75-84	7.8	2.8	3.4
85 or Older	2.1	0.8	0.6
Seniors			
65 or Older	22.0%	8.6%	9.6%
60 or Older	28.3	10.9	12.1
55 or Older	34.9	12.8	13.9

Source: Morrison Institute for Public Policy, data from ASU Center for Business Research using information from U.S. Bureau of the Census, 2000 census.

- **Despite Yavapai County’s high median age, the most populous age brackets are those dominated by “baby-boomers,” not seniors.** The most populous age groups in 2000 were those age 35 to 44 and 45 to 54 – groupings that nearly coincide with what is known as the “baby-boom” generation (those born from 1946 to 1964). The large size of the baby-boom age groups compared to those both younger and older helps explain changes in the county’s age distribution from 1990 to 2000 (see Table 2) – the share of Yavapai County residents from 25 to 34 years old decreased as the baby-boomers aged out of that group while the share of those 45 to 54 years old increased as baby-boomers aged into that group.
- **The senior share of the population in Yavapai County has declined slightly.** During the 1990s, the percentage share of seniors 55 and older dropped 1.4 percent in the county though it held steady in the state and the nation. The greatest declines occurred among those 65 to 74, with some increases occurring among those 75 and older. The share of younger adults age 25 to 34 years old also dropped somewhat, but not as much in Yavapai County as elsewhere.

TABLE 2: Changes in Yavapai County Age Distribution from 1990 to 2000

Age Group	Yavapai Percent Change 1990-2000	Difference in Share from Arizona	Difference in Share from U.S.
0-4	-0.4%	0.1%	0.2%
5-9	-0.6	-0.5	-0.6
10-14	0.3	-0.1	-0.1
15-19	0.4	0.3	0.4
20-24	0.1	0.6	1.0
25-34	-2.2	0.6	1.0
35-44	-0.3	-0.9	-1.2
45-54	4.1	1.4	0.8
55-59	1.1	0.4	0.5
60-64	-0.7	-0.5	-0.2
65-74	-3.1	-2.3	-2.3
75-84	0.8	0.3	0.4
85 or Older	0.5	0.2	0.2
Seniors			
65 or Older	-1.8 %	-1.8%	-1.7%
60 or Older	-2.5	-2.3	-1.9
55 or Older	-1.4	-1.9	-1.4

Source: Morrison Institute for Public Policy, data from ASU Center for Business Research using information from U.S. Bureau of the Census, 2000 and 1990 censuses.

- **Arrival of new residents accounts for all of Yavapai County's recent growth.** From 1990 to 2000, the county experienced a rapid growth rate of 56 percent, adding a total of nearly 60,000 residents. But the number of births in Yavapai County was exceeded by the number of deaths during this time. Therefore, all of the county's growth was the result of a net in-migration of residents – the excess number of those moving into the county compared to those moving out.
- **New arrivals during the 1990s were older than average, with seniors and baby-boomers each strongly represented.** The median age of net migrants to Yavapai County between 1990 and 2000 was 47.2, nearly 12 years older than the median age for the nation (35.3). High net in-migration was evident in all age groups from 35 to 74, with seniors and baby-boomers each contributing about one-third of the county's total net inflow. Meanwhile, net in-migration of younger adults during the 1990s – especially those 20 to 24 years old – was weak.

TABLE 3: Estimated Net Migration to Yavapai County, 1990 to 2000

Age Group in 2000	Number
0-4	800
5-14	7,900
15-24	5,200
25-34	4,100
35-44	10,300
45-54	10,400
55-64	11,400
65-74	9,300
75-84	1,600
85 or older	200
TOTAL	61,200

Source: Morrison Institute for Public Policy, data from ASU Center for Business Research estimating from U.S. Bureau of the Census, 2000 and 1990 censuses, and births and deaths from the Arizona Department of Health Services and the U.S. Department of Health and Human Services, National Center for Health Statistics.

- **Age distribution is not uniform across Yavapai County.** Among the 28 total “places” (cities, towns, and unincorporated communities) identified by the 2000 census, most had median ages greater than the national median age. Five, however, did not – Ash Fork, Bagdad, Paulden, and the two Indian reservations. Median ages ranged from 23.5 for the Yavapai-Apache Reservation and 31.6 at Bagdad to 55.5 in Big Park (the Village of Oak Creek) and 60.4 in Congress.

TABLE 4: Population and Median Age in Yavapai County Places, 2000

Region of County and Place	Population	Median Age	Percent Share 55 or Older
YAVAPAI COUNTY	167,517	44.5	34.9%
Central:			
Prescott	33,938	47.8	40.1
Prescott Valley	23,535	37.3	26.7
Yavapai-Prescott Reservation	182	26.3	12.6
Southeast:			
Black Canyon City	2,697	47.4	36.3
Cordes Lakes	2,058	46.7	39.0
Dewey-Humboldt	6,295	53.9	48.4
Mayer	1,408	43.7	31.9
Spring Valley	1,019	48.8	43.4
Northeast (Verde Valley):			
Big Park	5,245	55.5	50.8
Camp Verde	9,451	42.0	32.0
Clarkdale	3,422	46.0	37.9
Cornville	3,335	41.4	24.7
Cottonwood	9,179	41.0	34.1
Cottonwood-Verde Village	10,610	42.0	32.3
Jerome	329	46.4	23.9
Lake Montezuma	3,344	44.7	34.4
Sedona*	10,192	50.5	41.7
Yavapai-Apache Reservation	743	23.5	12.4
Northwest:			
Ash Fork	457	33.8	20.6
Bagdad	1,578	31.6	12.0
Chino Valley	7,835	39.8	27.0
Paulden	3,420	35.3	19.0
Seligman	456	40.6	30.2
Williamson	3,776	50.8	40.7
Southwest:			
Congress	1,717	60.4	59.2
Peoples Valley	374	57.0	52.7
Wilhoit	664	50.4	42.9
Yarnell	645	56.6	52.7

* Includes the portion in Coconino County.

Source: Morrison Institute for Public Policy, data from ASU Center for Business Research using information from U.S. Bureau of the Census, 2000 census.

- **Population increases have varied widely across Yavapai County.** Most places in the county experienced substantial population increases between 1990 and 2000, with Prescott Valley leading the gainers with 166 percent growth. The slowest growth occurred in mining communities and on Indian reservations, with Jerome's loss of 18 percent the only negative number in the county.
- **The median age of Yavapai County moved 2.1 years higher between 1990 and 2000.** Most of this upward trend in median age was due to the aging of baby-boomers, none of whom had reached age 55 in 2000, as well as the region's continuing strong attraction as a retirement haven. Not all places posted gains, however. While Jerome, Clarkdale, and Prescott saw substantial increases in median age, other locations such as Lake Montezuma, the Sedona area, and Prescott Valley had their median age drop.

TABLE 5: Changes in Population and Median Age in Yavapai County Places, 1990 to 2000

Region of County and Place	Population Gain	Percent Gain	Change in Median Age	Percent Share 55 or Older
YAVAPAI COUNTY	59,803	56%	2.1	-1.4%
Central:				
Prescott	7,483	28	4.1	1.6
Prescott Valley	14,677	166	-0.4	-5.6
Yavapai-Prescott Reservation	6	3	4.0	6.9
Southeast:				
Black Canyon City	886	49	-0.8	-5.8
Dewey-Humboldt	2,655	42	0.2	-0.1
Northeast (Verde Valley):				
Big Park	2,221	73	-3.6	-4.1
Camp Verde	3,208	51	0.7	-2.9
Clarkdale	1,278	60	5.0	2.2
Cornville	1,246	60	4.0	-0.1
Cottonwood	3,261	55	2.2	-0.3
Cottonwood-Verde Village	3,573	51	-0.2	-4.4
Jerome	-74	-18	6.4	1.8
Lake Montezuma	1,503	82	-7.2	-12.4
Sedona*	2,472	32	-1.4	-4.8
Yavapai-Apache Reservation	125	20	0.0	1.4
Northwest:				
Bagdad	280	15	2.5	3.6
Chino Valley	2,998	62	2.0	-2.5

Note: 1990 data were not available for Cordes Lakes, Mayer, Spring Valley, Ash Fork, Paulten, Seligman, Williamson, Congress, Peebles Valley, Wilhoit, and Yarnell.

* Includes the portion in Coconino County.

Source: Morrison Institute for Public Policy, data from ASU Center for Business Research using information from U.S. Bureau of the Census, 1990 and 2000 censuses.

Finances of the Senior Population

Sources and level of income vary by age – as do expenditure patterns. According to the latest 1999 data (U.S. Bureau of Labor Statistics Current Expenditure Survey), the average per capita income for seniors was 5 percent higher nationally than for other age groups. In addition, senior income is much less dependent on wages and salaries than income of younger age groups because it tends to be comprised mainly of Social Security and other retirement benefits as well as dividends, interest, and income from rent.

Seniors also tend to spend more per person than other age groups. According to 1999 national data, households headed by someone at least 55 years of age in 1999 had 17 percent higher expenditures per person than did younger households nationally. Wealth is also higher among senior households nationally. According to the latest 1995 data released by the U.S. Bureau of the Census, median net household worth exceeded \$80,000 in each age group 55 or older, and was highest – over \$100,000 – in households headed by someone in the 65-to-69 age group. In comparison, the median net household worth for 45-to-54 year olds is considerably less at only \$60,000, and much lower for younger age groups.

While income and expenditure data by age group are not currently broken out for Yavapai County by the Bureau of Labor Statistics or the Bureau of the Census, it is possible to estimate the county's senior expenditures (see notes following Table 7). Based on such estimates and other data, senior finances have the following impacts on the Yavapai County economy:

- **Personal income in Yavapai County strongly reflects senior influences.** Nearly one-third of the county's total personal income for all age groups in 1999 was derived from dividends, interest, and rent, compared to not quite one-fifth statewide and nationally. In addition, about 15 percent of Yavapai County's personal income came from retirement and disability insurance payments and Medicare, compared to less than 10 percent in Arizona and the U.S. On a per person basis (see Table 6), retirement and disability income per Yavapai County resident – and to a lesser extent, dividends, interest, and rent – were considerably higher than the state or national averages in 1999. These modes of income tend to be more stable than wages and other forms of earnings, and are therefore considered more “recession-proof.”
- **Recent gains in personal income in Yavapai County have not kept pace with the nation.** Between the end of the last recession in 1991 and the most recent data published in 1999, per person gains in personal income were less in Yavapai County than in the state or nation. Income gains were particularly low in categories that affect senior income: Medicare; dividends, interest, and rent; and other transfers such as public assistance and veterans' benefits.

TABLE 6: Per Capita Personal Income in Yavapai County, 1999

	Yavapai Per Capita Income	Ratio to Arizona	Ratio to U.S.
TOTAL	\$20,181	84%	72%
Portion of Total Due to:			
Earnings	9,825	61	52
Dividends, Interest, and Rent	6,429	136	121
Retirement and Disability Insurance	2,332	171	168
Medicare	698	109	94
Other Transfers	896	76	60
INFLATION-ADJUSTED CHANGES 1991 TO 1999			
TOTAL	+11%	-5	-6
Portion of Total Due to:			
Earnings	+19	-2	-1
Dividends, Interest, and Rent	+2	-4	-15
Retirement and Disability Insurance	+9	+6	-3
Medicare	+12	-6	-21
Other Transfers	+1	-9	-9

Note: Totals may not add due to rounding.

Source: Morrison Institute for Public Policy, data from ASU Center for Business Research using information from U.S. Bureau of Economic Analysis.

- **Seniors provide more than their share of consumer spending.** Estimates of senior expenditures (see Table 7) show that they are responsible for more than 38 percent of the spending made by Yavapai County residents, compared to their population share of not quite 35 percent.¹
- **Seniors have the greatest economic impact on health care.** The 55 or older population accounted for more than half of the expenditures in health care, exhibiting a per capita spending rate 2.5 times higher than younger residents. The 55 or older population also had high expenditures for cash contributions to charitable organizations, housing maintenance and repair, property taxes, reading materials, public transportation, and insurance. In contrast, people 55 or older accounted for less than 30 percent of spending on education, vehicle finance charges, mortgage payments, and rents.
- **New senior migrants to Yavapai County account for an estimated \$113 million of residential construction annually.**² In total, they account for about 40 percent of the \$281 million total value of new residential construction in Yavapai County in 2000, assuming that seniors purchase only average-priced homes, not more expensive ones.
- **The net in-migration of seniors contributes significantly to the overall economy.** Based on per capita senior spending in 1999 of \$16,575 and an average of 2,250 net senior migrants in a given year, the addition of new senior residents every year adds at least \$37 million in spending to the local economy. This figure, however, does not reflect the much higher expenditures of first year residents who tend to purchase more “big-ticket” items when they relocate – particularly a house, household furnishings, supplies, and major services.

¹ Estimates were made by multiplying 1999 national per capita expenditure figures by Yavapai County's 2000 population count. Limitations of this methodology are discussed in the notes for Table 7.

² Calculated based on an average senior household size of 2.1 persons, net annual senior in-migration of 2,250 resulting in absorption of about 1,050 housing units – of which approximately 900 are purchased – and an average value of a single-family building permit in Yavapai County during 2000 and the first half of 2001 of slightly more than \$125,000 excluding the cost of land.

TABLE 7: Estimated Expenditures by Residents of Yavapai County *(In Millions of Dollars)*

Expenditure Category	Expenditures by Less Than 55	Expenditures by 55 or Older	Total	Share 55 or Older
TOTAL	\$1,532	\$951	\$2,483	38%
FOOD AND BEVERAGES	228	133	361	37
Food at Home	121	77	199	39
Food Away from Home	93	49	141	35
Alcoholic Beverages	14	7	21	34
HOUSING	489	296	785	38
Mortgage Interest and Charges	122	41	164	25
Property Taxes	42	38	80	48
Maintenance, Repair, Insurance, Other Expenses	29	33	62	54
Rent	95	37	132	28
Utilities, Fuels, Public Services	94	71	165	43
Household Operations	26	20	46	43
Housekeeping Supplies	20	15	35	43
Household Furnishings and Equipment	62	41	103	40
APPAREL AND SERVICES	76	41	117	35
TRANSPORTATION	302	169	471	36
Vehicle Purchases	145	76	221	35
Gasoline and Motor Oil	46	25	71	35
Vehicle Finance Charges	15	6	21	28
Maintenance and Repairs	27	18	46	40
Vehicle Insurance	31	20	52	39
Vehicle Rental, Leases, Licenses, Other Charges	23	11	34	31
Public Transportation	15	13	28	47
HEALTH CARE	60	86	146	59
Health Insurance	28	42	69	60
Medical Services	20	20	40	51
Drugs	9	19	29	67
Medical Supplies	3	5	8	58
ENTERTAINMENT	79	49	128	38
OTHER	101	60	162	37
Personal Care Products and Services	16	12	28	41
Reading	6	5	11	48
Education	31	9	40	23
Tobacco Products and Smoking Supplies	13	7	20	34
Miscellaneous	34	28	62	44
CASH CONTRIBUTIONS	37	52	89	58
LIFE AND OTHER PERSONAL INSURANCE	15	13	28	45
PENSIONS AND SOCIAL SECURITY	144	52	196	27

Note: Totals may not add due to rounding.

Additional Notes:

1. Assumes total per capita consumer spending is equal to the national average. Yavapai County figures are probably lower given the county's low per capita personal income and historically low household income.
2. Assumes distribution of spending among categories to be equal to the national average. Spending patterns in Yavapai County may be different.
3. Not all of the expenditures are made in Yavapai County. For example, some purchases by Yavapai County residents may be made in Coconino or Maricopa counties.
4. Tourists, seasonal residents and businesses also make purchases in Yavapai County; these figures are unknown. Thus, the estimates in this table do not represent total spending in the county.
5. Estimated spending calculated as 1999 national per capita average expenditures times the number of residents in Yavapai County in 2000. Those 55 or older made up 35 percent of the county's population.
6. The expenditures by senior industries components were estimated from the expenditure categories. Because of the many assumptions and approximations necessary, the results should be interpreted cautiously. The financial and legal component could not be separately estimated.

Source: Morrison Institute for Public Policy, data from ASU Center for Business Research calculating from the U.S. Bureau of Labor Statistics, 1999 Consumer Expenditure Survey, using 2000 decennial census counts.

The Economy of Yavapai County

One important means of evaluating the economy of a local area is to mathematically compare it to the economy of a much larger area. Such a comparison yields a “location quotient.” When the location quotient is greater than 1.0 (the national average) it suggests that the local industry’s concentration is relatively large, usually indicating it is important to the local economy.³ For this study, location quotients were computed by comparing an industry sector’s share of total county employment to the same sector’s share of total national employment.

Two data sources were used in this analysis – SIC and NAICS⁴. These two systems vary in their names and definitions for industry sectors so they are not closely comparable. Following are highlights of the most significant characteristics of Yavapai County’s economy. Note that NAICS only compiles information on the private sector, so public sector data are not included in any tables based on its statistics.

- **Retail trade, health care and social assistance, accommodation and food services, and construction dominate employment in Yavapai County.** Each holds a double-digit share of county employment. Together they account for more than half of total county employment. All are significantly influenced by senior spending patterns – as well as by general population growth and seasonal residents.

TABLE 8: Employment in Yavapai County, 1999

NAICS Sector	Employment	Share	Location Quotient*
TOTAL	43,864	100.0%	
Retail Trade	7,412	16.9	1.29
Health Care and Social Assistance	6,217	14.2	1.13
Accommodation and Food Services	6,144	14.0	1.61
Construction	4,916	11.2	2.00
Manufacturing	3,660	8.3	0.55
Administrative Support and Waste Management	2,170	4.9	0.65
Real Estate and Rental and Leasing	2,028	4.6	2.73
Other Services	1,992	4.5	0.98
Educational Services	1,496	3.4	1.55
Finance and Insurance	1,426	3.3	0.60
Wholesale Trade	1,369	3.1	0.58
Professional, Scientific, Technical Services	1,365	3.1	0.54
Arts, Entertainment and Recreation	941	2.1	1.45
Mining	844	1.9	4.68
Information	788	1.8	0.62
Transportation and Warehousing	623	1.4	0.43
Utilities	304	0.7	1.15

Note: Total does not add because data were not disclosed for some sectors.

* Shows the concentration of a sector’s employment relative to the national average of 1.0.

Source: Morrison Institute for Public Policy, data from ASU Center for Business Research using information from U.S. Bureau of the Census, 1999 County Business Patterns.

³ Yavapai County’s small employment base for its size – about 20 percent less per capita than the national average – tends to slightly overstate the size of these location quotients.

⁴ The old national Standard Industrial Classification (SIC) is currently in transition to the new North American Industry Classification System (NAICS). The newer NAICS provides more detail by industry and is more reflective of our modern economy, while the older SIC system provides historical information that can depict changes over time.

- **Wholesale trade and finance/insurance/real estate experienced the fastest recent growth in Yavapai County.** With greater than 100 percent growth between 1991 and 1999 (i.e., since the end of the last recession), wholesale trade and finance/insurance/real estate led all Yavapai County industries. Construction and services (including health care) also experienced rapid growth – 83 percent and 69 percent respectively.

TABLE 9: Change in Employment in Yavapai County, 1991-1999

SIC Sector	Employment	Share	Location Quotient*	Employment Change 1991-99
TOTAL	69,494	100.0%		56%
Services (includes health care)	22,609	32.5	1.03	69
Retail Trade	13,896	20.0	1.22	47
Government	8,501	12.2	0.90	26
Construction	6,925	10.0	1.76	83
Finance, Insurance, Real Estate	6,762	9.7	1.23	101
Manufacturing	4,131	5.9	0.51	44
Wholesale Trade	2,127	3.1	0.67	109
Transportation, Communications, and Public Utilities	1,866	2.7	0.55	22
Mining	1,029	1.5	3.10	-13
Agricultural Services	924	1.3	1.06	60
Farm	724	1.0	0.54	22

* Shows the concentration of a sector's employment relative to the national average of 1.0.

Source: Morrison Institute for Public Policy, data from ASU Center for Business Research using information from U.S. Bureau of Economic Analysis.

- **The Prescott-Prescott Valley area dominates economic activity in Yavapai County.** In 1997, more than half of the county's total employment and nearly half of its businesses were located in the Prescott-Prescott Valley area. The same area also had the highest average payroll per employee in the county. Second in both categories was the Verde Valley area, followed by the balance of the county. (The latest data available from 1997 do not provide detailed information for specific unincorporated places in the county.)

TABLE 10: Establishments by Region in Yavapai County, 1997

SIC Sector	Number of Establishments	Employment	Average Employment per Establishment	Average Payroll per Employee
TOTAL*	4,870	42,425	9	\$17,800
Prescott-Prescott Valley	2,380	23,260	10	\$18,400
Verde Valley*	1,939	15,433	8	\$17,100
Balance of County	551	3,732	7	\$16,500

* Includes the portion of Sedona in Coconino County.

Source: Morrison Institute for Public Policy, data from ASU Center for Business Research using information from U.S. Bureau of the Census, 1997 Zip Code Business Patterns.

Composition and Size of Senior Industries in Yavapai County

It is not possible to calculate the exact size of senior industries in Yavapai County due to the nature of the end market – nearly all goods and services consumed by seniors are also purchased by the younger population. But when national age group spending habits are combined with Yavapai County demographic data, it becomes possible to identify economic activities that are of unusual size due, at least in part, to the county's large population of seniors.

The industry sectors most influenced by senior spending include health care, construction, real estate, retail trade, and most categories of services. Certain other sectors considered to be part of senior industries are also highly influenced by tourism, for example accommodation and food services, and arts/entertainment/recreation. This makes sense because tourism is ordinarily the first essential step toward in-migration of seniors to an area, thus the two industry clusters develop hand-in-hand. Following is a closer look at each of the main component sectors of senior industries with particular attention paid to the characteristics of health care and social assistance. Again, public sector data are not included in most tables because they are not reported by NAICS.

- **Several industry sectors influenced by seniors are unusually large in Yavapai County.** Among the sectors listed below, real estate and construction have the highest shares of employment compared to the nation, but nearly all sectors are higher than the national average.

FIGURE 2:
**Sectors Providing Direct Products
and Services to Seniors**

Large Sectors

Health Care and Social Assistance
Construction
Retail Trade
Accommodation and Food Services

Medium Sectors

Real Estate
Educational Services
Finance and Insurance
Arts, Entertainment, and Recreation
Other Services

Small Sectors

Utilities
Transit and Ground Passenger Transportation

Sectors as classified by NAICS.

**TABLE 11: Employment in Economic Activities Influenced By Seniors
in Yavapai County, 1999**

NAICS Sector	Employment	Share of County Employment	Location Quotient*
Retail Trade	7,412	16.9%	1.3
Health Care and Social Assistance	6,217	14.2	1.1
Accommodation and Food Services	6,144	14.0	1.6
Construction	4,916	11.2	2.0
Other Services	1,992	4.6	1.0
Real Estate	1,779	4.1	3.7
Educational Services	1,496	3.4	1.6
Finance and Insurance	1,426	3.2	0.6
Arts, Entertainment, and Recreation	941	2.1	1.5
Utilities	304	0.7	1.2
Transit and Ground Passenger Transportation	116	0.3	0.8

* Shows the concentration of a sector's employment relative to the national average of 1.0.

Source: U.S. Bureau of the Census, 1999 County Business Patterns.

Health Care and Social Assistance

- **Nursing and residential care is the most highly concentrated of all the health care and social assistance subsectors.** Within the subsector, two of its three largest industry groups are directly tied to seniors: nursing care facilities (the largest industry group), and community care facilities for the elderly.
- **Offices of medical professionals, medical labs, and outpatient care centers also have higher shares in Yavapai County than in the nation.** In particular, medical professionals other than doctors and dentists (such as chiropractors, naturopaths, and therapists) had twice the share in Yavapai County as in the nation.

TABLE 12: Employment for the Health Care and Social Assistance Sector in Yavapai County, 1999

NAICS Sector	Employment	Share	Location Quotient*
TOTAL	6,217	14.2%	1.1
AMBULATORY HEALTH CARE SERVICES	2,231	5.1	1.3
Offices of Physicians	843	1.9	1.3
Offices of Dentists	390	0.9	1.4
Offices of Other Professionals	333	0.8	2.0
Outpatient Care Centers	262	0.6	1.2
Medical and Diagnostic Laboratories	110**	0.3**	1.8**
Home Health Care Services	158	0.4	0.5
Other	135**	0.3**	1.8**
HOSPITALS	1,740	4.0	0.9
NURSING & RESIDENTIAL CARE FACILITIES	1,522	3.5	1.5
Nursing Care Facilities	857	2.0	1.4
Mental Retardation/Health & Substance Abuse	312**	0.7**	2.0**
Community Care Facilities for the Elderly	350	0.8	1.9
Other	3**	0.0**	0.1**
SOCIAL ASSISTANCE	734	1.7	1.0
Individual and Family Services	272	0.6	0.9
Services for Elderly and Disabled	102***	0.2	0.9
Community, Emergency & Relief Services	81**	0.2**	1.8**
Vocational Rehabilitation Services	139**	0.3**	1.1**
Child Day Care Services	242	0.6	0.9

Note: Totals may not add because data were not disclosed for some sectors.

* Shows the concentration of a sector's employment relative to the national average of 1.0.

** Estimated: The federal government withholds data in sectors in which few companies operate.

*** These figures included in Individual and Family Services.

Source: Morrison Institute for Public Policy, data from ASU Center for Business Research using information from U.S. Bureau of the Census, 1999 County Business Patterns.

- The average number of employees per establishment for the health care and social assistance sector in Yavapai County is only 13, well below the national average of 21. Offices of medical professionals (doctors, dentists, and other professionals) make up nearly two-thirds of all the county's establishments in the sector.

TABLE 13: Establishments in the Health Care and Social Assistance Sector in Yavapai County, 1999

NAICS Sector	Number of Establishments	Average Employment Per Establishment Yavapai	Average Employment Per Establishment U.S.
TOTAL	493	13	21
AMBULATORY HEALTH CARE SERVICES	359	6	10
Offices of Physicians	154	6	9
Offices of Dentists	72	5	6
Offices of Other Professionals	92	4	5
Outpatient Care Centers	20	13	24
Medical and Diagnostic Laboratories	5	22*	16
Home Health Care Services	14	11	46
Other	2	67*	26
HOSPITALS	3	580	718
NURSING & RESIDENTIAL CARE FACILITIES	54	28	42
Nursing Care Facilities	14	61	94
Mental Retardation/Health & Substance Abuse	9	35*	18
Community Care Facilities for the Elderly	29	12	27
Other	2	1*	24
SOCIAL ASSISTANCE	77	10	15
Individual and Family Services	27	10	17
Services for Elderly and Disabled	14**	7	21
Community, Emergency & Relief Services	5	16*	11
Vocational Rehabilitation Services	3	46*	38
Child Day Care Services	42	6	10

* Estimated: The federal government withholds data in sectors in which few companies operate.

** These figures included in Individual and Family Services.

Source: Morrison Institute for Public Policy, data from ASU Center for Business Research using information from U.S. Bureau of the Census, 1999 County Business Patterns.

- **Hourly wages for most health care occupations in Yavapai County closely parallel national averages.** Only speech pathologists and recreational therapists appear to receive well below average wages. The small size of occupational samples in this data, however, may skew results based on specific employment situations at the time of collection.

TABLE 14: Employment and Wages by Health Care Occupation in Yavapai County, 1999

	Employment	Median Hourly Wage Yavapai	Median Hourly Wage U.S.	Yavapai Ratio to U.S.
HEALTH CARE PRACTITIONERS & TECHNICAL OCCUPATIONS	2,760	\$17.49	\$NA	NA
Dietitians and Nutritionists	10	17.26	17.54	0.98
Pharmacists	60	33.33	32.16	1.04
Family and General Practitioners	70	60.15	54.34	1.11
Registered Nurses	1,140	18.00	20.33	0.89
Occupational Therapists	30	26.32	23.73	1.11
Physical Therapists	50	29.92	27.08	1.10
Recreational Therapists	50	10.08	13.47	0.75
Speech-Language Pathologists	30	14.59	22.03	0.66
Radiologic Technicians	110	15.67	16.47	0.95
Pharmacy Technicians	60	9.02	9.11	0.99
Licensed Practical and Licensed Vocational Nurses	130	14.60	13.39	1.09
Medical Records and Health Information Technicians	90	9.61	10.37	0.93
HEALTH CARE SUPPORT OCCUPATIONS	1,190	8.39	NA	NA
Home Health Aides	230	8.22	8.21	1.00
Nursing Aides, Orderlies and Attendants	520	7.43	8.29	0.90
Occupational Therapist Assistants	10	15.63	15.79	0.99
Physical Therapist Assistants	20	14.97	15.90	0.94
Medical Assistants	250	11.61	10.48	1.11
Medical Transcriptionists	40	9.76	11.67	0.84
Medical and Public Health Social Workers	20	14.70	16.16	0.91

Note: Totals may not add because data were not disclosed for some occupations.

Source: Morrison Institute for Public Policy, data from ASU Center for Business Research using information from Arizona Department of Economic Security, Research Administration.

- **Productivity per health care employee is lower than average in Yavapai County.** Only two categories of health care and social assistance (for which data were available) rose above national averages for receipts per employee – home health care services, and offices of dentists – though the nursing care facilities category was very close to average.

TABLE 15: Employee Productivity for Health Care and Social Assistance Sector in Yavapai County, 1997

NAICS Sector	Total Receipts (in Millions)	Average Receipts Per Employee	Yavapai Ratio to U.S.
TOTAL	\$167.5	\$55,600	0.83
AMBULATORY HEALTH CARE SERVICES	124.3	73,300	0.89
Offices of Physicians	59.7	90,700	0.83
Offices of Dentists	27.4	76,200	1.01
Offices of Other Professionals	15.8	58,600	0.84
Outpatient Care Centers	6.1	72,400	0.73
Home Health Care Services	7.5	39,800	1.26
NURSING & RESIDENTIAL CARE FACILITIES	37.7	35,100	0.93
Nursing Care Facilities	29.1	38,000	0.99
Community Care Facilities for the Elderly	8.0	27,900	0.77
SOCIAL ASSISTANCE	5.5	22,400	0.87

Note: Totals may not add because data were not disclosed for some sectors.

Source: Morrison Institute for Public Policy, data from ASU Center for Business Research using information from U.S. Bureau of the Census, 1997 Economic Census.

- **Prescott hosts the greatest share of health care and social assistance activity in Yavapai County.**
Among those sectors for which data were reported in 1997, nearly half of the county's total health care and social assistance establishments and employees – and more than half of total receipts – were concentrated in the city of Prescott. Cottonwood had the second largest share with almost one-fifth of the total.

TABLE 16: Economic Activity by Yavapai County Place for Health Care and Social Assistance Sector, 1997

NAICS Sector	Yavapai County	Camp Verde	Chino Valley	Cottonwood	Prescott	Prescott Valley	Sedona **	Balance of County
Number of Establishments								
TOTAL	377	13	7	68	175	30	34	49
AMBULATORY HEALTH CARE SERVICES	308	7	4	60	155	15	31	36
Offices of Physicians	125			36	66		10	6
Offices of Dentists	68			9	32	3	8	11
Offices of Other Professionals	86			9	42		13	14
NURSING & RESIDENTIAL CARE FACILITIES	40	4		4	13			8
Community Care Facilities for the Elderly	24				7			4
SOCIAL ASSISTANCE	29		3		7			
Receipts (in Thousands of Dollars)								
TOTAL	\$167,465	\$6,927	\$2,955	\$30,422	\$86,587	\$7,454	\$9,866	
AMBULATORY HEALTH CARE SERVICES	124,259		1,320	24,457	68,804	5,672		12,444
Offices of Physicians	59,706			16,712	34,332			2,513
Offices of Dentists	27,361			2,537	12,181	1,912		
Offices of Other Professionals	15,822			1,647	7,164			
NURSING & RESIDENTIAL CARE FACILITIES	37,694							
Community Care Facilities for the Elderly	7,969							
SOCIAL ASSISTANCE	5,512		1,635					
Annual Payroll (in Thousands of Dollars)								
TOTAL	\$66,824	\$2,544	\$1,243	\$13,777	\$32,925	\$2,932	\$3,351	
AMBULATORY HEALTH CARE SERVICES	48,578		285	11,887	25,336	2,160		5,105
Offices of Physicians	26,237			8,887	14,281			908
Offices of Dentists	8,330			889	3,322	489		
Offices of Other Professionals	5,678			723	2,159			
NURSING & RESIDENTIAL CARE FACILITIES	15,524							
Community Care Facilities for the Elderly	3,055							
SOCIAL ASSISTANCE	2,722		958					
Employment								
TOTAL	3,014	138	104	479	1,480	179	143	483*
AMBULATORY HEALTH CARE SERVICES	1,695	30*	19	338	910	96	128*	174
Offices of Physicians	658			207	340		49*	27
Offices of Dentists	359			38	172	17		
Offices of Other Professionals	270			25	135			
NURSING & RESIDENTIAL CARE FACILITIES	1,073							
Community Care Facilities for the Elderly	286							
SOCIAL ASSISTANCE	246		85					

Note: Totals may not add because data were not disclosed for some sectors; blanks indicate data were not available.

* Estimated.

** Only the Yavapai County portion.

Source: Morrison Institute for Public Policy, data from ASU Center for Business Research using information from U.S. Bureau of the Census, 1997 Economic Census.

Construction and Real Estate

- **Construction is a highly concentrated industry in Yavapai County, particularly residential building construction and land subdivision and development.** The large size of the overall construction sector in Yavapai County is a result of the county's fast population growth and increased commercial activities. Seniors are responsible for a major portion of that activity. The county is also above average for seasonal housing units according to the 2000 census.
- **Real estate activity is a very highly concentrated sector in Yavapai County.** The portion of this industry most affected by senior expenditures includes offices of real estate agents and brokers. These offices are also impacted by overall population growth of the region.

TABLE 17: Construction and Real Estate Employment in Yavapai County, 1999

NAICS Sector	Employment	Share	Location Quotient*
CONSTRUCTION TOTAL	4,916	11.2%	2.0
BUILDING AND GENERAL CONTRACTING	1,460	3.3	2.4
Land Subdivision and Land Development	93**	0.2	3.5
Residential Building Construction	1,036**	2.4	3.5
Non-residential Building Construction	331**	0.7	1.1
HEAVY CONSTRUCTION	595	1.4	1.8
SPECIAL TRADE CONTRACTORS	2,861	6.5	1.9
REAL ESTATE TOTAL	1,779	4.1	3.7
LESSORS OF REAL ESTATE	176	0.4	0.9
OFFICES OF REAL ESTATE AGENTS/BROKERS	202	0.5	2.0
ACTIVITIES RELATED TO REAL ESTATE	1,401	3.2	7.3
Real Estate Property Managers	1,200***	2.7	7.8
Other Real Estate Activities	201***	0.5	5.1

* Shows the concentration of a sector's employment relative to the national average of 1.0.

** These figures included in Building and General Contracting.

*** Estimated; these figures included in Activities Related to Real Estate.

Retail Trade and Services

- **Gambling industries are extremely concentrated in Yavapai County.** The region's two Indian-run casinos tend to be strongly supported by an older population, routinely drawing senior participants from outside the region. Thus, the gambling industry could be considered one of the few export-oriented components of senior industries in Yavapai County.
- **Several service sectors are strong in Yavapai County.** Among those that are most highly concentrated are amusement/gambling/recreation, food services and drinking places, and educational services. The first two are also strongly influenced by tourism.
- **Most retail subsectors are only moderately concentrated.** The subsector influenced by senior spending that showed the highest concentration is building materials and garden equipment dealers, a subsector that is tied to construction and landscaping of new homes.

TABLE 18: Retail Trade and Services Employment in Yavapai County, 1999

NAICS Sector	Employment	Share	Location Quotient*
RETAIL TRADE TOTAL	7,412	16.9%	1.3
MOTOR VEHICLES AND PARTS DEALERS	934	2.1	1.3
FURNITURE AND HOME FURNISHING STORES	281	0.6	1.4
ELECTRONICS AND APPLIANCE STORES	147	0.3	1.0
BUILDING MATERIAL AND GARDEN SUPPLY	843	1.9	1.8
FOOD AND BEVERAGE STORES	1,545	3.5	1.3
HEALTH AND PERSONAL CARE STORES	339	0.8	0.9
GASOLINE STATIONS	629	1.4	1.7
CLOTHING AND ACCESSORY STORES	430	1.0	0.8
SPORTING GOODS, HOBBIES, BOOKS, MUSIC	264	0.6	1.1
GENERAL MERCHANDISE STORES	1,250	2.9	1.3
MISCELLANEOUS STORE RETAILERS	563	1.3	1.7
NON-STORE RETAILERS	187	0.4	0.9
ACCOMMODATION AND FOOD SERVICES	6,144	14.0	1.6
ACCOMMODATION	1,207	2.7	1.8
FOOD SERVICES AND DRINKING PLACES	4,937	11.3	1.6
OTHER SERVICES	1,992	4.6	1.0
REPAIR AND MAINTENANCE	770	1.8	1.5
PERSONAL AND LAUNDRY SERVICES	436	1.0	0.9
RELIGIOUS, CIVIC, SOCIAL ORGANIZATIONS	786	1.8	0.8
EDUCATIONAL SERVICES	1,496	3.4	1.6
FINANCE AND INSURANCE	1,426	3.2	0.6
CREDIT INTERMEDIATION (Banking and Related)	835	1.9	0.8
SECURITIES AND COMMODITIES	133	0.3	0.4
INSURANCE CARRIERS AND AGENTS	458	1.0	0.5
ARTS, ENTERTAINMENT AND RECREATION	941	2.1	1.5
PERFORMING ARTS AND SPECTATOR SPORTS	103	0.2	0.8
MUSEUMS AND HISTORICAL SITES	46	0.1	1.2
AMUSEMENT, GAMBLING, RECREATION	792	1.8	1.7
Gambling Industries	310**	0.7	4.4
Other Amusement and Recreation	480**	1.1	1.4
UTILITIES	304	0.7	1.2
TRANSIT AND GROUND PASSENGER TRANSPORTATION	116	0.3	0.8

Note: Totals may not add because data were not disclosed for some sectors.

* Shows the concentration of a sector's employment relative to the national average of 1.0.

** Estimated; these figures included in Amusement, Gambling, Recreation.

Dynamics of Senior Industries in Yavapai County

Relationships Among Senior Industries Components

Flourishing industry clusters typically develop complex relationships that link together all levels of the cluster hierarchy, from markets to foundations. These types of relationships tend to reduce costs for supplies and increase innovation, and they keep cluster members aware of industry trends and new solutions. In short, these relationships can be highly synergistic. Senior industries, however, spans a cross-section of the overall economy of the region, and in doing so it encompasses industry sectors that normally wouldn't develop close connections. Consequently most inter-business linkages in senior industries tend to be focused within the individual components – such as within the health care sector or within the construction sector, but not between the health care and construction sectors. Therefore, very few joint ventures or marketing efforts tie separate sectors together.

Informal linkages, however, occur frequently among business leaders due to the county's relatively low population. They occur because small communities usually require residents to wear many different “hats” in their day-to-day lives and, consequently, business people tend to cross each other's paths through participation in civic organizations, trade groups, or boards. In Yavapai County, some popular organizations for leaders of senior industries are county-wide, but most tend to be restricted in scope to one or another of the distinct geographic and economic regions of the county, primarily the tri-city area (Prescott-Prescott Valley-Chino Valley) or the Verde Valley.

Among the most prominent types of relationships that exist among Yavapai County senior industries business components are the following:

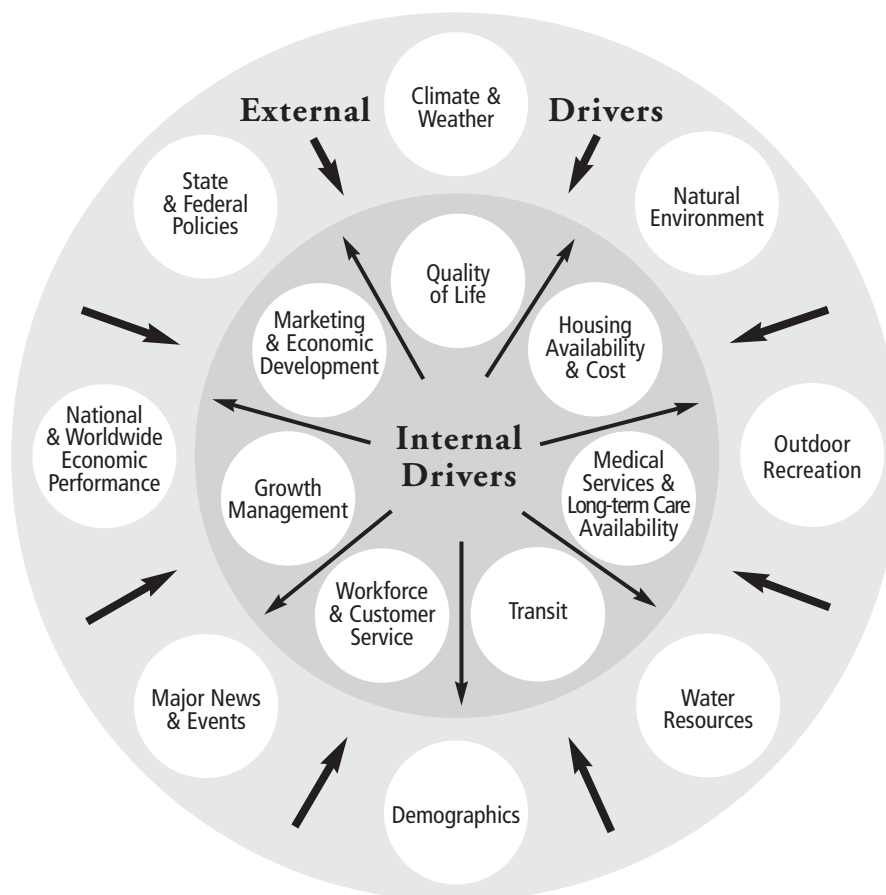
- **Direct business-to-business relationships drive commerce within industry sectors.** These relationships are essential in order for businesses to develop reliable suppliers and buyers for their products and services. For example, a home builder in Prescott must contract with local materials suppliers and building specialists in order to complete construction projects, and must also work with area realtors and lenders to market and sell the finished products.
- **Businesses rely on industry networks to coordinate service delivery to customers.** Formal and informal networks provide referrals and support for complex business activities. For example, seven funeral homes in the Verde Valley work together informally to provide each other with assistance when necessary. Also, the Yavapai Regional Medical Center accommodates or coordinates with a number of individuals and businesses, including ambulance services, physicians, law enforcement agencies, churches, florists, social workers, hospice organizations, and long-term care facilities, among others.
- **Many businesses rely on trade associations and industry interest groups.** Some industry groups offer specific, business-related functions. For example, the local home builders association provides information and political advocacy for building contractors, and a national construction retail association offers group purchasing power for a small retailer in Prescott Valley. Other organizations, such as the Verde Valley Senior Care Providers provide information and policy discussion on rapidly changing issues related to health care.
- **Public-private partnerships leverage money and human resources.** Governments and the private sector often collaborate to accomplish projects that might not be feasible for either party to undertake individually. One example is the senior center in Prescott, which is owned by a private company but staffed and maintained by city personnel. Another example is C.A.T.S. (Cottonwood Area Transit System), in which a private bus company obtains federal and local government funds to help operate a public transportation network in four Verde Valley communities.

- **Most businesses maintain working relationships with area institutions.** Connections between businesses and institutions are usually direct. For example, workers in several fields – particularly health care – receive worker training and continuing education classes from Yavapai College; assisted living facilities in Yavapai County contract directly with the county’s Department of Medical Assistance; and most businesses engage in regulatory and tax issues with local government agencies. In addition, many indirect connections exist. These often derive from business people assuming public office or serving on economic development foundations, planning commissions, and other institutional boards.
- **Yavapai County Indian Tribes engage directly in local economic and social affairs.** Tribal enterprises play a leading role in the regional economy through the marketing and operation of popular enterprises such as gambling casinos, conference facilities, and shopping centers. The tribes and their enterprises also rank as leaders in civic involvement and charitable giving through their support of area schools and public service organizations, and participation on regional boards.

Senior Industries Drivers

Yavapai County’s senior industries benefit from an attractive location and a mild climate that combine to foster a desirable lifestyle for retirement-age people. These factors and many others act as economic “drivers” – external and internal forces that affect how, where, and to what extent senior industries will grow. External drivers include natural resources, trends, and events that mainly lie beyond the control of the local community. Internal drivers include assets, policies, and services that primarily reside within the community’s sphere of influence. Among the external and internal factors affecting senior industries in Yavapai County are the following:

FIGURE 3: Forces Affecting Yavapai County Senior Industries



External Drivers

- **Climate and Weather.** Yavapai County encompasses a wide range of elevations and temperatures, but overall the weather is relatively mild with at least some evidence of all four seasons. Such a climate is attractive for both out-of-state and in-state visitors: it appeals to northern migrants who see it as warm but not overly hot, and to urban desert dwellers who view the climate as refreshingly cool.
- **Natural Environment.** Open space and clean air are among the natural attractions of Yavapai County. Also significant are the region's signature red rock cliffs, imposing mountains, expansive pine forests, scenic waterways, designated wilderness areas, and abundant wildlife. Possible threats to these assets could arise from inappropriate development, degradation of scenic vistas, drying of streams and springs, or pollution of air and water.
- **Outdoor Recreation.** Residents and visitors see the region's open spaces as a priceless outdoor recreation playground because much of the land is federal or state owned. Threats to open spaces could come from overcrowding of popular recreation areas, severe resource damage from fire or other causes, or loss of access to open spaces.
- **Water Resources.** Residents and visitors expect water to flow whenever they open their faucets. Should serious water shortages occur, senior migration into Yavapai County would likely cease. Even the threat of a water shortage could reduce the rate of new in-migrants.
- **Demographics.** The U.S. population is aging and Yavapai County is leading the way. This trend is robust not only because people are tending to live longer and produce fewer offspring, but also because the largest age group in the U.S. – baby-boomers – will soon begin swelling senior age groups. This is an extremely positive sign for places seeking to attract seniors, but the threat is that a larger elderly population will increase demands on a service labor pool that could be shrinking.
- **Major News and Events.** Positive media coverage of an area can boost visitation and interest in real estate, leading to an increase in the number of senior relocations there. Prescott and Sedona have experienced this effect in the past. Such a trend, however, could suddenly reverse should media reports turn sour.
- **National and Worldwide Economic Performance.** Strong national and international economic performance tends to boost senior wealth because most seniors benefit from some form of investment in financial markets. A protracted slump in the economy, however, could reduce disposable senior income and diminish migration.
- **State and Federal Policies.** A wide range of government policies can affect the desirability of an area for retirement. Low state tax rates, for example, would be seen as a positive factor, while federal decisions to open up scenic areas to strip mining or oil drilling would be considered negative.

Internal Drivers

- **Quality of Life.** An important attraction to in-migrating seniors is the region's quality of life. In Yavapai County the desirable qualities most often mentioned include a small town atmosphere, low crime rate, manageable traffic, informal lifestyle, and plenty of activities oriented toward an older population.
- **Housing Availability and Cost.** Newly arrived seniors need housing, and it appears obvious that the construction and real estate industries must be able to supply it. Less obvious is the fact that workers who serve a senior population also need suitable housing. One major obstacle for workers is that the costs of housing in and near retirement areas tends to be too high for their income levels. Failure to provide affordable worker housing could leave the region short on labor.

- **Medical Services and Long-term Care Availability.** Maintaining optimum capacity for medical and long-term care needs is critical. Too much capacity causes businesses to lose money; too little capacity causes seniors to receive poor service. Health care industry planners must achieve a difficult and dynamic balance to properly serve senior clients.
- **Transit.** One of the isolating effects of aging is losing the ability to get out for shopping, socializing, and health care. While this problem appears greatest for low income elders, even the wealthy can suffer. Safe and efficient modes of public transit that consider the special handicaps of age can ameliorate this isolation and help seniors maintain their independence.
- **Workforce and Customer Service.** Elderly seniors tend to require higher levels of service than many younger age groups. For a retirement area to remain attractive to seniors over time, it must maintain an adequate pool of service workers and a high level of customer service. Currently, Yavapai County's labor pool is comparatively small.
- **Growth Management.** Relocating seniors often voice opposition to growth in their new communities in order to protect the qualities that drew them in the first place. While freezing growth might not be in the region's best interests – either economically or in terms of providing services – management policies that protect the community's primary assets are essential to maintaining the area's attraction.
- **Marketing and Economic Development.** Focused efforts to market Yavapai County as an attractive retirement location will potentially increase revenue for the businesses that serve them. Tourism marketing to older age groups is also likely to benefit senior industries.

Competitors

In addition to the push and pull of economic drivers, Yavapai County also faces competition from other retirement destinations. Among the competitors for relatively well-heeled and active seniors are the following:

- **Planned retirement communities.** Master planned retirement areas in other parts of Arizona, such as Sun City and its derivatives, have captured a large segment of the existing retiree market because they have geared leisure activities and lifestyles exclusively toward older people. These retirement communities in metropolitan settings can also provide a wider range of housing prices and deeper medical/health care infrastructure than can more rural settings. However, as the baby-boom generation reaches retirement age over the next few decades, attitudes of these new seniors are likely to change and monolithic retirement villages may not hold the same attraction as they have in the past.
- **Rural West.** Many small cities and towns in Arizona and other western states – such as Colorado, Utah, and Nevada – have been luring active seniors in recent years. Key to the appeal of these areas is their quality of life, but other factors also influence senior relocation decisions including climate, the availability of services, local cost of living, and the financial bite of tax laws.
- **Southern coastal states.** Seniors whose top priority is a warm climate and access to water have also chosen to retire in states such as Texas, the Carolinas, and especially Florida. Potential advantages of these areas include the possibility of a beach lifestyle, greatly reduced temperature extremes, and the likelihood of living closer to family and long-time friends. Some of these areas, however, suffer from over-popularity which has led to reduced quality of life and future resource problems.

- **Home towns.** Many seniors choose not to leave home when they retire. The percentage of those who select this option may begin to increase if developers and institutions in “home towns” across the country find ways to make senior living more attractive. The advantage of staying home is remaining close to family and friends (assuming they don’t relocate elsewhere). Nevertheless, large numbers of footloose retirees will continue to flock to Arizona – at least seasonally – as long as the quality of life in the state remains high.

Requirements for Growth and Vitality

Leaders of Yavapai County senior industries say they want both their businesses and the region’s infrastructure prepared to serve a growing senior population. To accomplish this goal, they have identified a number of requirements for maintaining and improving the health of senior industries. Based on analysis of formal interviews conducted with a wide variety of people representing a cross-section of the region’s businesses and institutions related to senior industries, the future needs of senior industries in Yavapai County include the following:

- **Adequate workforce.** In order to provide needed services for a growing senior population, a sufficient pool of workers must be obtained, trained, and retained. Unless employers find success in all three areas, services will decline.
- **Education on aging and end-of-life decisions.** Family and volunteer caregivers need to have a better understanding of the financial, legal, and medical realities of aging and death.
- **Adjustments in Medicare reimbursements and reduction in medical liability.** Without higher Medicare reimbursements for services, doctors will avoid taking on geriatric patients. And until the potential for liability is reduced when treating geriatric patients, every death – even the most “natural” – could lead to a lawsuit.
- **Improved public amenities for seniors.** Many areas of the county need larger and better stocked libraries. Seniors also need more walking paths, bike trails, and other opportunities for outdoor exercise in order to maintain a healthier lifestyle.
- **Improved/expanded public transportation.** A better system of public transit would benefit not only elderly seniors who are unable to drive, but also many of the workers needed to serve them whose low pay precludes buying a car.
- **Resolution of water resource issues.** Uncertainty over water supplies can dampen growth, but no one wants growth to exceed the supply of water.
- **More regional cooperation.** Regional thinking and cooperation is needed on issues such as public transit, traffic mitigation, affordable housing, planning and zoning, and the plight of uninsured workers. Piecemeal approaches fail to get the job done and make regulatory issues unwieldy for businesses.

Opportunities for Collaborative Action

The primary objective of this study is to foster strategic planning for the future of senior industries in Yavapai County. Interviews conducted for this research, however, revealed that some sectors of senior industries – such as the construction and health care sectors – are poorly connected with each other, if at all. While businesses in different sectors may not immediately see an obvious day-to-day economic reason to join forces, it is clear that they are closely intertwined through their common market – seniors – and the enormous influence of senior spending. Moreover, economic circumstances that favor one sector can impact the other. For example, a boom in growth would boost revenue for builders, but could also eventually lead to capacity shortfalls in health care or resource problems affecting other sectors of senior industries. Consequently all sectors must be in balance with each other in order for Yavapai County to remain an attractive retirement location. For this reason, a working group of leaders from the component sectors of senior industries as well as related governments and institutions should work together on common goals.

FIGURE 4:
Long-term Strategies to Keep Senior Industries Healthy

Workforce

- Bolster the labor pool
- Reduce labor needs by increasing worker productivity

Health Care Capacity

- Keep the elderly functional and productive
- Educate about aging; aid unpaid caregivers
- Address Medicare and medical liability challenges

Infrastructure

- Protect natural assets and quality of life
- Assure adequate distribution of facilities for senior health care
- Expand public transit for seniors and workers
- Address affordable housing needs of seniors and workers
- Think and plan regionally

Economic Development

- Develop exports
- Lead with senior industries

Below are a number of long-term strategies to strengthen senior industries and position it for the future. Not every suggestion is likely to be feasible at any given time, nor is every one necessary to keep the industry healthy. It is, however, recommended that initiatives be prioritized based on active local support. Then top priority goals should be matched to willing “champions” who can provide leadership and oversight.

Workforce

- **Bolster the labor pool.** Yavapai County has a smaller than average labor pool and senior industry leaders say they can’t find, train, and retain enough workers to keep their operations running smoothly. Several ideas have been floated for recruiting more workers. These include drawing from the ranks of high school students, tapping the flow of immigrants crossing the Mexican border, and recycling retired seniors back into the workforce. Each of these strategies raises additional issues that would have to be addressed (e.g., language barriers and housing needs for immigrants; chronic injuries for older workers), therefore practical plans need to be formulated. Once new workers are found – particularly in health care – they need specialized training before they can become effective. While certification training for new health care workers appears to be satisfactory in general, some employers feel it could be made more timely for their needs – for example, by scheduling more intense training periods that result in shorter time to certification. Much more important, however, is the need for employers to find new ways to retain workers once they are recruited and trained. Possible incentives would include the prospect of advancement and higher pay, the availability of affordable housing, convenient public transportation for reaching the work place, good working conditions and medical benefits, and the advantages of the public amenities and unspoiled natural environment of the area. Some of these potential incentives are discussed further under Infrastructure.

- **Reduce labor needs by increasing worker productivity.** The size of the labor force required to serve seniors can be reduced by making employees more productive, but usually this is easier said than done. One possible approach for health care is to invest in interactive technologies that can help diagnose and prescribe treatment of medical conditions for remote patients without face-to-face contact. Approaches for long-term care include deployment of sophisticated electronic monitoring systems that allow fewer staff to effectively supervise elderly residents, and the use of assistive technologies (e.g., lifts) to reduce staff exertion and injuries.

Health Care Capacity

- **Keep the elderly functional and productive.** Maintaining the function and independence of elderly seniors has the potential to benefit the economy – for example, through continuing productive employment or volunteer services, and also through reduced public expense for such things as long-term care and other services. One way to accomplish this, according to recent research, is to provide a mentally and physically stimulating setting for the elderly. With this in mind, efforts should be made to integrate elderly seniors into the region's rich cultural community and thereby reduce their potential for isolation and decline. Strategies include increasing the availability of senior housing close to cultural centers, expanding public transit for the elderly, providing easily accessible exercise programs and facilities for seniors, offering assistive devices (e.g., walkers, handrails) to needy seniors, and engaging seniors in volunteer service or part-time employment.
- **Educate the populace about aging; provide services for unpaid caregivers.** Tremendous advances in health care have reduced the threats of many common diseases and increased human life expectancies, but they have also encouraged unrealistic expectations for the care of the aged. This discourages doctors and other medical professionals from specializing in geriatric medicine. Moreover, it leads many elderly seniors and their families to delay preparation for end-of-life issues. These situations might be mitigated by educating the families of elderly seniors on the legal, financial, medical, and emotional aspects of old age and death. Appropriate information could be made available through seminars, college courses, counseling, pamphlets, the internet, or other conduits. Meanwhile, expanded life spans have also placed increased burdens on unpaid caregivers (e.g., family and friends) who must juggle families, careers, and personal pursuits with their commitments to elderly dependents. These volunteer caregivers can greatly expand the long-term care capacity of the community and reduce public costs for such care, but the expense to their lives is sometimes too high for them to continue their commitment. They would benefit from training and timely advice on how to manage their elderly charges throughout the various stages of aging, as well as periodic respite from their caregiving duties through a network of support services, such as adult day care.
- **Adjust Medicare/Medicaid reimbursements and address medical liability challenges.** A combination of low Medicare/Medicaid reimbursements and liability threats could undermine attempts to improve capacity for senior care. Already, seniors on Medicare without supplemental insurance have difficulty finding physicians because low Medicare reimbursements lead medical offices to limit the number of these patients they will accept. Similarly, long-term care reimbursements from Medicaid (administered in Arizona by ALTCS – Arizona Long Term Care System) often fail to cover costs of service. Liability challenges also threaten capacity. Physicians have been discouraged from treating geriatric patients or seeking a specialty in geriatric medicine because of the increased potential for lawsuits. And long-term care facilities have been hit by sharp increases in liability insurance and little choice among carriers. While resolution of these issues is under the purview of state and national lawmakers, a grassroots lobbying effort may be needed to convince state legislators and the Arizona Congressional delegation they should take action to find practical solutions.

Infrastructure

- **Protect the region's natural assets and quality of life.** The beauty of Yavapai County's natural environment and the small town ambience of its cities and towns provide two of the county's biggest economic assets; they act as powerful magnets for tourists, retirees, and second home buyers. The population growth that results from these magnets, however, inevitably threatens their attractiveness, therefore they require some means of protection if they are to survive. As a basis for planning suitable protection strategies, an inventory should be conducted of the most desirable assets and values of the region.
- **Assure adequate distribution of facilities for senior health care throughout the county.** Yavapai County is at the leading edge of a national trend toward mushrooming of the senior population in coming decades. Currently, most health care facilities reside in Prescott. In order to meet growing demand for senior services in other parts of the county, business and government leaders will need to cooperatively guide future distribution of medical and emergency facilities throughout the region.
- **Expand public transit offerings for seniors and workers.** Both seniors and the workers who serve them require transportation – seniors to maintain their independent living, and workers to reach their work place, which is often far from home. Elderly seniors, however, tend to lose their ability to drive as they age, and the workers who serve them frequently can't afford a reliable vehicle. This combination complicates service delivery. A reliable regional system of subsidized public transit would go a long way toward reducing isolation of the elderly, bolstering the labor force, and assuring health care capacity for seniors.
- **Address affordable housing needs of seniors and workers.** Many elderly seniors need affordable housing near community and medical services, and the workers who serve them need affordable housing near the seniors they serve. While worker housing issues plague most economically successful American communities, a number of experiments are underway in resort towns and major cities across the West. Case study of these projects could provide useful ideas on how Yavapai County could mitigate affordable housing shortages for elderly seniors and workers.
- **Think and plan regionally.** Most of the issues facing senior industries in Yavapai County cannot be resolved effectively at the local municipal level. In order to succeed with long-term solutions, business, tribal, and government leaders across the county must think regionally and work together cooperatively to implement regulations and allocate resources.

Economic Development

- **Develop exports.** Senior spending plays a major role in the economy of Yavapai County. As a potential cluster, however, senior industries will not truly drive the economy forward until it attracts or spawns substantial export-driven businesses. One way this could occur is under a scenario in which the area attracts an active research community interested in carrying out clinical studies of products developed for older age groups. In another scenario, local residents might invent or manufacture innovative products that benefit an aging population or their care providers. Either situation – or others – could create high quality jobs and improve the prospects of the region's workers and businesses, while also providing special, local benefits to Yavapai County's seniors.
- **Lead with senior industries.** Arizona is said to lack a clear economic identity, yet Yavapai County already enjoys a national reputation as a retirement haven. While this reputation has undoubtedly contributed to a number of growth-related issues that must be solved over the long-term, it might be wise to treat this reputation as a long-term economic opportunity, rather than a problem. One strategy would be to shore up weak areas – such as the aforementioned workforce, health care capacity, and infrastructure issues – and then actively promote the county as an exemplary retirement location.

Appendix A

Interviews Conducted

During September and October of 2001, a total of 24 formal interviews were conducted with individuals representing diverse interests and locations. Names, titles and affiliations are given as of the time of interview.

	Name	Title	Company/Organization
Tri-City Area*			
	Larry Asaro	City Manager	City of Prescott
	Tim Barnett	CEO	Yavapai Regional Medical Center (Prescott)
	Mardy Taylor	Chief Nursing Officer	
	Dave Corbeille	Owner	Authentic Building Supply (Prescott Valley)
	Bob Folger	Realtor	Lindquist Realtors (Prescott)
	John Goodman	Pharmacist & Owner	Goodwin Street Pharmacy (Prescott)
	Gary Marks	Executive Director	Prescott Valley Economic Development Foundation
	Gary Olson	Administrator	Mountain View Manor (Prescott)
	Robert Pecharich	Partner	Boyle, Pecharich, Cline & Whittington (Prescott)
	Joel Petersen	Manager	Wal-Mart (Prescott)
	Marilyn Rabideau	Council Member	Town of Prescott Valley
	Karen Rizk	V.P., Commercial Loan Officer	National Bank of Arizona (Prescott)
	Carl Tenney	Town Manager	Town of Chino Valley
Verde Valley Area			
	Michael Bluff	Council Member	Town of Clarkdale
		V.P. & General Counsel	Mingus Construction
	Brenda Hauser	Mayor	Town of Camp Verde
	Ken Johnson	Stockbroker	Edward Jones (Sedona)
	Dr. Frank Nagy	Medical Director	Kachina Point Health Care and Rehabilitation Center (Sedona)
	Steve Palmer	Owner/Director	Westcott Funeral Home (Cottonwood/Camp Verde)
	Shirley Scott	Transportation Manager	Cottonwood Area Transit System
	Linda Stevenson	Executive Director	Verde Valley Caregivers (Sedona)
Tribal			
	Stan Rice, Jr. Ernie Jones Gary Swigart	President Vice-president Personnel Manager	Yavapai Prescott Indian Tribe
Regional			
	Mona Berkowitz	Director	Yavapai County Department of Medical Assistance
	Henry Camarot	District 1 Representative	Arizona House of Representatives
	Doreen Dailey	President	Yavapai College
Other County			
	June Kellett	Project Director	Mayer Senior Nutrition Project and Mayer Elders Center

*Prescott, Prescott Valley, and Chino Valley.

Appendix B

Summary of Comments and Group Discussion January 25, 2002

The initial public presentation of *Gray Matters: An Economic Analysis of Yavapai County's Senior Industries* was conducted at Yavapai College in Prescott on January 25, 2002. Following this presentation, two activities took place. First, representatives of Yavapai College commented on the findings of the report and the college's role in providing leadership and support to resolve issues facing senior industries. Second, members of the audience representing a cross section of regional interests discussed issues related to the report's findings and suggested strategies for collaborative action.

Yavapai College Comments

Four representatives from Yavapai College – including the president, vice-president for economic development, and two consultants on aging issues – offered brief remarks. Among their comments were the following:

- Yavapai County's current demography is a precursor of what the rest of the nation will experience in the next two or three decades, therefore it can provide leadership on aging issues. For example, the county can serve as a model for sustaining an aging population, and it can serve as a "living laboratory" for research on aging.
- Leaders of senior industries and public institutions in Yavapai County should use the research provided in *Gray Matters* to move forward in addressing aging issues. In particular, medical and mental health care need relief from a financial crisis caused by federal funding cuts.
- The region needs to think broadly about how to expand its workforce. For example, it should provide more amenities that appeal to a younger population in order to attract and retain young workers who are critical for entry-level service jobs.
- County residents should be educated to look at aging as an "incremental process" (an increase in wisdom) instead of a "decremental process" (a mental or physical deterioration). They need to appreciate what seniors bring to the county – their financial resources, experience, volunteer efforts, and charitable works.
- Yavapai College is well positioned to offer leadership and support on a number of issues related to senior industries and aging. The college currently provides worker training for senior industries, cultural programs and classes that attract seniors, and a variety of degree programs for all ages. For the future, the college is developing a gerontology curriculum to educate on aging-related topics, and it has proposed a Center for Productive Aging to keep elderly residents engaged and active. The college can also advance the use of technology to increase access to health care in remote areas.

Group Discussion

Members of the audience were asked to address four categories of proposed collaborative actions presented in the report: workforce, health care capacity, infrastructure, and economic development. Among their comments were the following:

Workforce

- Consideration should be given to the capabilities and limitations of different populations of workers, such as high school students and returning retirees. One goal that can be accomplished very quickly is to identify which job openings are most appropriate for different segments of the workforce, and specify the training and skills they require.
- A recent increase in national chain stores in the region has limited local control over wages. The national headquarters of these stores tend to dictate low pay scales.
- More good jobs are needed for younger workers. Low wages in the region cause many to move to Phoenix or other large cities in search of higher paying jobs.
- Although new immigrants from Mexico are a potential source of workers for the region, it is not necessary to recruit them because Yavapai County already contains a large population of Mexican immigrants who are underutilized. Instead, the region needs effective bilingual education and training programs to give these workers greater language and job skills.
- Senior women have proven to be excellent in-home care workers because they have experience in caring for others, are willing to work part-time, and are not discouraged by low pay. Lack of transportation, however, is a major obstacle for them.
- Entry level workers need to be shown a career ladder that can lead them to increasing skill levels and higher pay. For example, a hospital orderly should understand the steps needed to become a nurse.
- Workers need incentives to come to the region and stay. One idea for recruiting nurses is to provide free tuition to nursing students who commit to working in the county for a period of time.

Health Care Capacity

- Senior centers around the region need to reexamine their services in light of demographic trends that show people retiring younger and healthier. To better serve this younger senior population, they might offer appropriate exercise programs or other activities that attract active retirees.
- The region should solicit a “retirement” radio program that is devoted to seniors. This radio program could serve as a platform for educating the populace on aging issues.
- More doctors could be attracted to the region if they were provided incentives such as free office space in return for a commitment to take on current residents as patients. Attracting a Mayo Clinic branch could also increase health care capacity and provide an export function.
- Adjustments must be made in federal and state funding formulas, which currently favor metropolitan counties over rural counties for medical and mental health care. It is not appropriate for metropolitan areas to receive higher reimbursements under Medicare, ALTCS, and Veterans Administration programs, when the costs for providing care in rural areas are the same or higher.

Infrastructure

- More child care services are needed for working parents, especially 24-hour operations that can accommodate night shift workers.
- Transportation is a serious problem for seniors and workers. The area currently offers very little in the way of public transit, therefore it has the opportunity to create a regional solution.

Economic Development

- The region's challenge is to take the assets it already has – a large senior population and related services and facilities – and use these assets to make Yavapai County a model for addressing senior care issues and other age-related concerns. One approach could be to create or attract research institutions that would be regionally based, such as a local Mayo Clinic branch.
- The county does not need to create more jobs because unemployment is already very low. Instead, it needs to attract more workers.

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